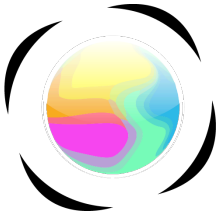
LIQUID NOTES

music intelligence



Welcome!

Liquid Notes is a highly intelligent composition assistant for your music productions. Take your arrangement to perfection from within!

Music theory, harmony, chords, and melodies: have your composition analyzed in musical depth and alter your entire arrangement on a professional level with only a few mouse clicks. Liquid Notes helps you optimize the impact of your music by comprehensive variation while not interfering with your very own musical style.

To take the **first steps** with the software, please refer to the **Quick Guide,** which can be accessed either from the Help menu or the welcome screen of the software.

For a deeper understanding about the function and nature of the software, please read the following **FAQ entries** on pages 21 and 22 in this user manual: **What does Liquid Notes do?** and **What can't Liquid Notes do?**

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Part 1

Features, System Requirements, and Installation

Features

- Standalone software for assistance in composing, harmonic analysis, and reharmonization: manipulation of chord functions, substitutions (exchanges), tensions (degree of dissonance), and cadences (progressions)
- Live improvisation and melody creation: corrects incorrect notes as you are playing them
- Import your own compositions for harmonic alteration and "effect optimization"
- Selection of style templates (pre-arranged music sequences): MIDI arrangements in various styles for harmonic alteration to get fresh musical ideas and to use further as sequences for larger compositions/productions
- Multi-track MIDI routing to software sequencers such as Logic, Cubase, Live, Pro Tools, Sonar, and many more, to control software instruments: no connection via VST, AU, or RTAS necessary
- Built-in synthesizers for independent use from sequencers

System requirements

Liquid Notes is implemented entirely in Java, which allows system-independent use in Windows, Mac OS X, and Linux. The recommended version of Java is 1.6.0_25+.

Windows. Windows XP, Vista, and Windows 7, 32/64 are supported.

Mac OS X. Due to certain restrictions with the Apple MIDI loopback driver, IAC bus use is recommended only from Java 1.6.0_25. Liquid Notes works with Mac OS X 10.5 or higher.

Linux. Linux is supported in principle. Licensing, installation, and the operation of Liquid Notes have been tested. For a connection to a sequencer, a MIDI loopback driver from a third party is required.

> *Note: Since Liquid Notes works on operating system level and is listed to the outside as a MIDI device via virtual busses, it should operate flawlessly with any commercially available sequencers. This compatibility was so far tested with Cubase (Windows versions 5 and 6) and Logic (versions 8 and 9), Sonar X1, and Pro Tools (from version 8). Further tests are planned with more sequencers. Live syncs fine but does not support* multi-track *MIDI export needed for placing the arrangement in Liquid Notes.*

Installation

After purchasing the software or ordering the trial version you will receive an email with download links. In the case that you purchased the product, the email will contain a software license number. Click on the link for your operating system to start the download.

Installing and updating to a higher version in Mac OS X

1. Install Liquid Notes by opening the installer package. As part of the installation Liquid Notes and *Licensing Daemon* are installed, which ensures the legitimate use of the software.

2. Complete the installation by restarting your computer (not necessary for updates).

3. Before starting Liquid Notes, open *Programs → Utilities → Audio MIDI Setup → Window → Show MIDI* window. Double-click *IAC Driver* and make sure that *Device ready* is checked. Create at least one port in the lower left table.

Installing and updating to a higher version in Windows

Install Liquid Notes by starting the setup program. The following programs are installed:

- Liquid Notes
- *Licensing Daemon:* ensures the legitimate use of Liquid Notes (not for updates)
- *LoopBe30*: Virtual MIDI cable to connect Liquid Notes with your sequencer (not for updates)

Complete the installation by restarting your computer (not necessary for updates).

Installation in Linux

Install Liquid Notes by starting the installer script.

Activating product

If you are in possession of a license number, open *Help → Start License Manager*. Enter the license number on the page *Product Activation* and click on *Activate*. The product is now activated. The license number is tied to your computer.

Transferring Product

If you want to use Liquid Notes on different computers, you can reset the license key at any time after activation and tie it to a different computer.

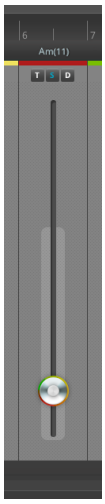
- Open *Help → Start License Manager*.
- In the upper pane click *Internet De-Activate*.
- Enter your license number and click on *De-Activate*.
- You have reset your license number. Now you can tie Liquid Notes to any other computer.

Part 2

Workspace and functions

Workspace

The user interface of Liquid Notes is now shown.



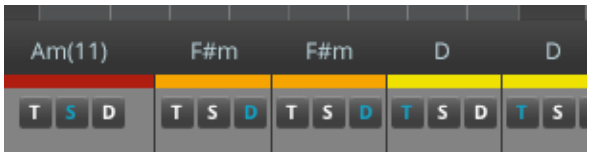
The most important elements in Liquid Notes are the **chord regions**. Their width corresponds to the duration of the respective harmony (chord plus scale).

The vertical expansion of the narrow, light gray bar in the middle of the chord segment corresponds to the tonal range of a chord in its basic position. Such **chord spans** in relation to each other indicate the "structural characteristics" of chord progressions and cadences. In case a new chord needs recalculation, the chord span will clear and reload when the buildup is complete.

The **controller** controls changes and via its position displays the "conventionality" of the respective chord. Sliding the controller up and down substitutes this chord (see page 8, Chord substitution and progression), whereas rotating it changes the tension (see page 8, Chord tension).

Clicking the controller once causes a short playback of the chord while double-clicking it recalculates the chord region (chord information and additional instrumental voices). This applies after you have made manual changes in the harmony settings, which are accessible through the *Settings menu*. See also FAQs on pages 21 and 22.

The **chord functions** are divided into the three basic functions of tonic, subdominant and dominant, indicated on the interface with **T**, **S**, and **D**.



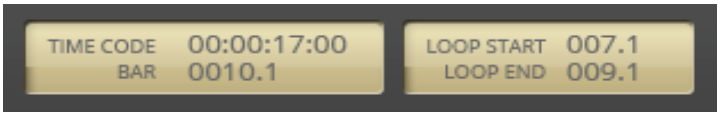
The current scale is shown in the bottom right corner. It is the **target scale** of LN Live, the integrated improvisation instrument of Liquid Notes (see page 9, LN Live). **Note In** indicates if LN Live receives a MIDI event. **Bypass** enables all notes to pass unfiltered.

The length of a loop can be defined by horizontal dragging with the mouse in the **loop bar** and results in a continuous repetition of the selected region. By directly clicking on the upper half of the bar the repetition is activated or deactivated. This can also be accomplished by clicking on the **loop symbol** in the transport panel (see next page).

The **transport panel** (see next page) controls the internal sequencer: The functions *jump to start*, *stop*, *play/pause, loop enable/disable and follow to the cursor when playing* enable a fast navigation.

The **multifunction mode** is set as the default setting of the program and allows the simultaneous processing of chords: substitution and change of tensions. In this mode you can adjust the tension of a chord by clicking and moving up the respective controller and holding down the Alt key. For more information see page 8, Chord tension.

By selecting the **tension editing mode** (button on the right), the exclusive editing of tensions is activated.



Time code shows the duration of the track from the beginning to the selected end point in seconds, the **beat display (bar)** located below indicates the corresponding beat progression. **Loop start** and **loop end** specify the number of beats that determine the beginning and the end of the loop region on the loop bar.

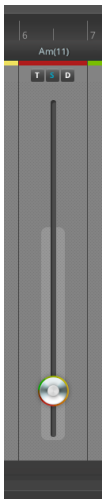
The **scroll bar's** function is to select the visible time range (by sliding it left and right) and to act as a zoom tool (by extending it). A horizontal pull of the left and right ends of the bar causes an increase or decrease in the visible range.

While zooming out, controllers of chords with a narrow chord region width may disappear because of their short duration. This will give you a better overview of your composition. If you increase the zoom distance even further, then the controllers of the other longer chords disappear, too. When maximizing the Liquid Notes window the controllers will not disappear as quickly.

The RESET function allows you to restore the original chord. It will appear when you roll the mouse cursor over the upper end of a chord region. The controller will not necessarily jump to its original position but stay in relation to its predecessor. See more on page 8, Chord substitution and chord progression.

Reharmonizing the music track

Chord substitution and chord progression



You can manipulate each chord with each affiliated controller. Indeed, such a "chord shifter" is the only tool needed in Liquid Notes to change a composition in a complex and effective way. A **substitution** of the chord occurs by sliding the controller upward and downward.

Such a substitution refers to all tracks except "locked tracks". Such tracks have no meaning for the formation of harmonies, such as rhythm tracks. The substitution will affect melody and chord tracks as well as bass ranges.

The relative position at which a controller is placed is a function of the "conventionality" (probability of expectation) of the sound of its chord and its predecessor. I.e. if the controllers of a composition are positioned more in the lower range, then this is an indication for a very conventional **chord progression**. Should you wish to make your composition more interesting or more unconventional, move the respective controllers up.

If the controller is positioned in the higher end, a very unusual jump in harmony may occur. Dragging down the controllers of the following chords creates a more suitable harmonic context for the jump. The position of a controller does not have to be dependent on a previous chord. If the scale changes at a certain point in the composition, the relative position of the controller might refer to the new scale instead.

Note: Liquid Notes ranks its suggestions in accordance to music theory, and terms such as "conventional" or "usual" are solely based on this theory. However, we acknowledge that music is perceived subjectively. Thus every harmonic change of a piece you know well may strike you as "unconventional".

By default, the chord selection is limited to ensure better results. Under *Settings → General → Limit available harmonies* you can deselect this limitation by one click. This could lead to very unusual results and should therefore be used with caution.

Chord tension (degree of dissonance)

You can add additional **tension notes** to a chord by sliding the controller up or down while holding down the *Alt key* or by selecting the *tension editing mode* (see page 7). This changes the chord's tension (degree of dissonance) but will affect only polyphonic parts of a composition. You can recognize the strength of the tension by the color of the line on top of the chord name in the chord field, and by the rotation position of the controller (see image above). The color shifts from green to red as the dissonance (or "sound color") of the chord intensifies.

Tensions in Liquid Notes are produced in various ways: by adding new sounds, or by displacing existing ones. The progressive sequence of the tensions results from a compromise between these two possibilities.

Attention: Normally, it is useful to activate Add Tension *only for one track of a music composition (see page 19, ReHarmonize settings).*

The tension of a harmony area displayed immediately after creation of a project may be the result of a combination of harmony information from multiple tracks. The change of tension, however, refers to the newly allocated tension tracks by Liquid Notes. If a harmony with initially very high tension is reharmonized on the same chord again (e.g. through a double click on the controller), this will add the respective tension sounds to the tension track even if they are not part of the track. For this reason it is recommended to reduce the tension of chord areas that have a very high initial tension, i.e. to keep more in the green area.

Chord function

The **chord function** can be manually chosen by clicking on the respective function button. Changing the function results in an entirely new set of possible chord substitutions.

T stands for Tonic (first scale degree), **S** for Subdominant (fourth scale degree), and **D** for Dominant (fifth scale degree), the prime steps of a basic cadence.

Altering its function will in most instances cause a distinct change in the perceived impact of a harmony. Functions influence the "deep nature" of chord progressions.

LN Live (improvising and creating melodies)

LN Live is an additional tool that allows you to improvise error-free via a QWERTY computer keyboard or a MIDI input device (e.g. keyboard). For routing instructions please refer to page 16, Settings for LN Live.

The benefit of LN Live is simple to understand: only correct notes can be played (wrong notes will be mapped to the right ones). While the song is playing, LN Live will automatically select the correct scale for harmony regions.

For MIDI devices, manual selection of the source scale is possible under *Settings → LN Live → Scale* and *→ Keynote*.

Playing via the computer keyboard

The three rows of letters on the computer keyboard allow you to play three octaves. Since the number of buttons per row exceeds the number of tones of a scale, you can play the next octave on the last 3-4 keys of each row. These notes are therefore represented twice.

Overview of the keyboard layout for LN Live:

First octave: Z to /
Second octave: A to ”
Third octave: Q to]

All one octave up: Shift keys
Velocity: numbers 1 to 7

See also page 16, Settings for LN Live

Part 3

Use of Liquid Notes with Own Projects

Workflow

Liquid Notes can be used at any time during your production. From idea generation to final mastering, Liquid Notes supports your project's progress.

Below are the steps that allow the program to seamlessly integrate into the production workflow:

Note: Liquid Notes only uses MIDI.

Exporting a MIDI file

1. Start the sequencer (Cubase, Logic, Pro Tools, etc.)

2. Create a music composition minding the instructions in the manual on page 14, Enhancing the analysis quality.

3. Export the music composition as a MIDI file.

Attention: Separate MIDI regions in a MIDI track might be exported as separate tracks, and thus appear in Liquid Notes as multiple tracks with the same name. If you combine these separate MIDI regions, you prevent splitting the track.

Altering the MIDI file in Liquid Notes

1. Start Liquid Notes.

2. Select *Open File* or drag it onto the Liquid Notes window (Mac OS only) and open the MIDI file previously exported.

3. Follow the instructions of the wizard.

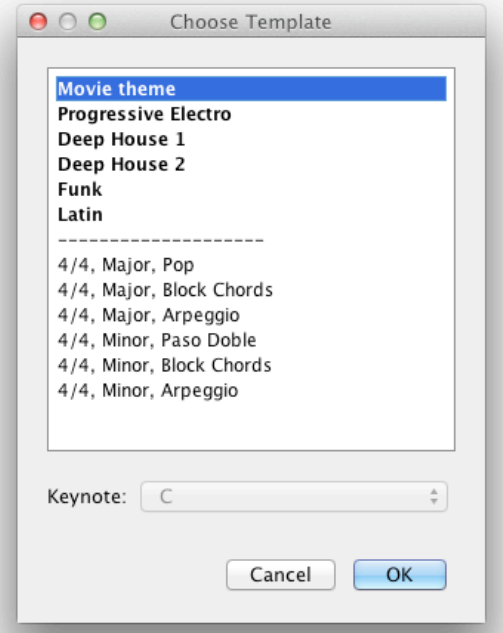
4. Modify chords, chord functions, tension, and chord progressions.

5. Use LN Live to create one or more new melody tracks in the sequencer. To save them they must be recorded in the sequencer.

6. Save the modified version of the piece as a MIDI file or record the routed MIDI data live in the sequencer.

Using pre-arranged music templates (Style Templates)

Directly in Liquid Notes, you may choose music templates from a list of various styles (i.e. chord progressions, arpeggios, or a variety of simple to elaborate arrangements). They will allow you to create harmonic ideas and compose more complex harmonic progressions for further use in larger compositions/ productions. We will keep extending this list of templates continually.



Select your style template from *File Menu → Load Template* and choose a keynote (if applicable).

By default, template arrangements are played by one of the built-in synthesizers and have been optimized for them. Find more information on page 17, Built-in synthesizers.

If you would like to use the templates with sequencers, check the routing settings so the notes are directed to the correct bus. The routing is different for each system, therefore there is no preset available.

Further use of harmonic changes in the sequencer

If the project was saved as a MIDI file, it must be mapped to the right tracks in the sequencer.

Live recording of tracks in the sequencer allows for immediate processing.

Note: Liquid Notes can be seen as a very effective mastering tool. It masters the structure of your composition instead of your *signal outputs. In almost all compositions you will find the following scheme: a musical theme is introduced and varied over the course of the piece. Such changes, whether small or large, make a composition interesting and the listening experience entertaining.*

Routing between Liquid Notes and the sequencer

If you would like to listen to your song with the sound of your preferred software instruments while altering the song in Liquid Notes, you can route the instrumental tracks from Liquid Notes through your sequencer to the respective software instruments. The best way to guarantee an exact correlation between MIDI tracks in Liquid Notes and the respective instruments in the sequencer is to export a MIDI file of the song session from your sequencer and import it into Liquid Notes. Upon importing a MIDI file into Liquid Notes a routing wizard will open automatically and guide you through the routing procedure.

The following steps are to be taken only in exceptional cases: In general, Liquid Notes selects the correct settings automatically. However, the sequencer must be configured manually. To receive all relevant information select *Next* in the wizard until the entire routing process is complete.

Routing in Mac OS X. In Mac OS X a separate MIDI interface, the IAC bus (Inter Application Communication Bus), is included:

1. Open the utility *Audio MIDI Setup* (if necessary search with Spotlight).

2. Select *Window → Show MIDI window*.

3. Double-click on *IAC driver*. For the routing to Logic at least one bus should be created. For routing to Cubase one bus for each instrument is recommended.

4. Activate *Device is online*.

5. Restart Liquid Notes. The IAC bus should now be selectable in the routing table.

6. Follow the instructions of the wizard to complete the configuration.

7. Set all tracks to record mode.

Note: This functionality is only available starting from OS X 10.5 and Java 1.6.0_25. Start the operating system's internal software update function to make sure you have installed the latest version of Java.

Routing in Windows (except for Cubase). The program *LoopBe30* is installed via the Liquid Notes installer and started afterwards. This program offers the possibility to create up to 30 MIDI busses which route MIDI data between applications.

1. Start Liquid Notes and the sequencer.

2. By default, Liquid Notes routes the MIDI data to the first bus of *LoopBe30*. Choose the same bus as the input in your sequencer. Align the channels of the matching tracks between Liquid Notes and the sequencer. You will find the channel mapping in the *Routing table* (second tab of the *Settings menu*).

3. In the sequencer, set all tracks to "record".

Routing for Cubase in Windows. The program *LoopBe30* is installed via the Liquid Notes installer and started afterwards. This program offers the possibility to create up to 30 MIDI busses which route MIDI data between applications.

1. Double-click the *LoopBe30 icon* in the right bottom of the task bar.

2. Create the same number of ports as there will be expected tracks.

3. Restart the computer.

4. Start Liquid Notes and the sequencer.

5. Select an output bus for each track in the routing table. Choose the respective input bus for the corresponding track.

6. In the sequencer, set all tracks to "record".

Enhancing the analysis quality

A composition can be prepared in advance to prevent or minimize analysis errors in Liquid Notes.

Creating a "clean arrangement"

1. Set every instrument on a separate instrument track.

2. Notes or regions with different channel numbers within a track should be avoided.

3. If an instrument has different functions within a music composition (e.g. strings, which play full chords, and sometimes also take on a melody function), dividing this track into one track per function helps.

Correct naming of percussion tracks

For the automatic classification of a track, the corresponding naming of the percussion tracks will be used. "Percussion", "perc", "drums" or "HiHat" are just some of the names that indicate a percussion track. Such indications are deliberately not considered in the harmony analysis because they do not contain harmony information. This trick can be used for all tracks whose notes do not agree with the perceived pitch (e.g. tracks with MIDI triggers of arpeggios, noise sounds, and others).

Creating a harmony track

When there is a clear harmony track, Liquid Notes carries out the analysis most effectively. In a harmony track at least three notes must be struck simultaneously to build an explicit chord. Additional notes, which are not necessary for the design of the chords, should be avoided.

If such an explicit chord track is not found in a composition, it is recommended to create one for the transmission of MIDI files to Liquid Notes. When this new track in Liquid Notes is muted, only the original composition is heard. Consequently, the chord track is only there to help optimizing the harmony analysis.

Attention: Be cautious of MIDI downloads from the Internet. Problems may arise since these MIDI downloads are often arranged inaccurately.

Later correction of melody notes

An incorrect, false, or unsatisfactory melody can be excluded from the harmony analysis by selecting the *percussion marker* in the wizard.

1. Deselect the checkbox *Lock ReHarmonize* in the options for ReHarmonize.

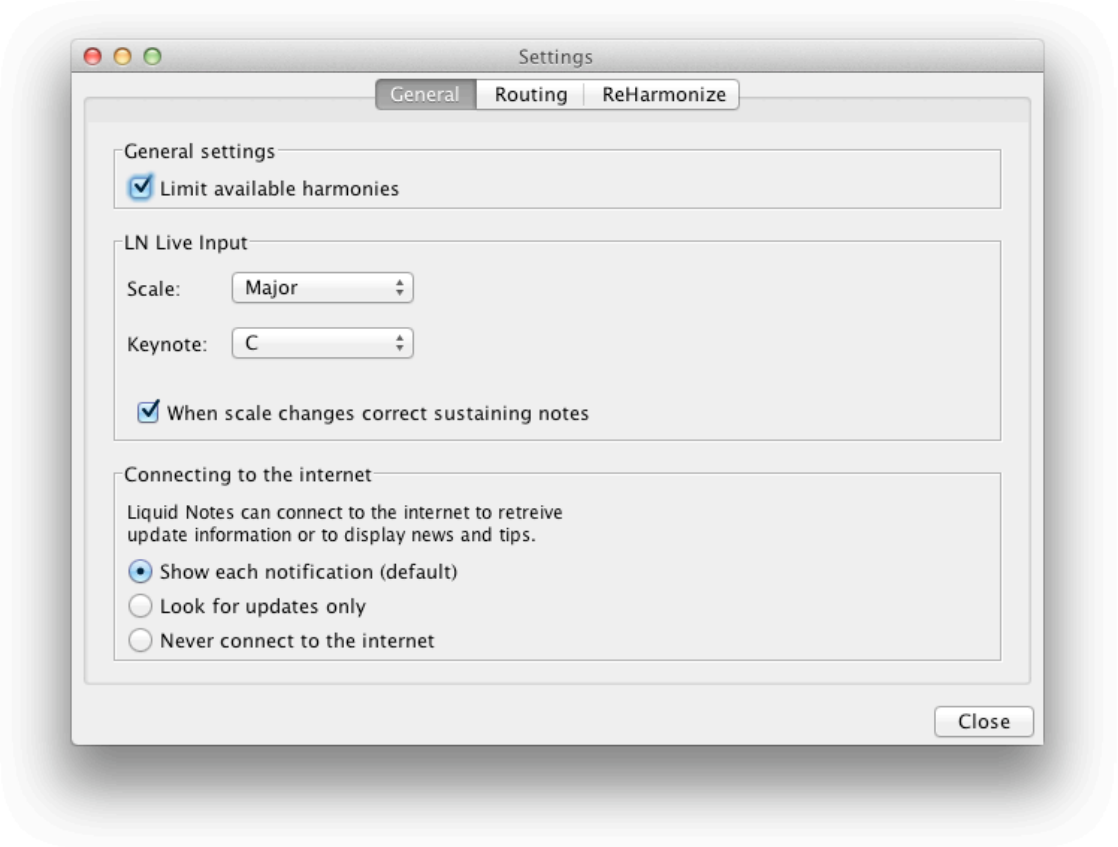
2. Then double-click the respective controller to correct the melody in this area and adjust the chord.

Part 4
Settings

General

Connecting to the Internet

In the settings menu, you can adjust the program's online behavior and the amount of information you want to receive. By default, you will get news, tips, and software update information. Choose *Look for updates only* if you would like to keep Liquid Notes up to date without any further information. If you prefer to keep your music production computer offline, choose *Never connect to the Internet*.



Limit available harmonies

It is recommended to leave this option enabled. However, for musically savvy users, for certain genres (like jazz), and for further musical experiments, it may be useful to extend the selection of available harmonies by switching off this option.

Attention: This option has no influence on the result of the harmony analysis. Harmonies that were already present in the music composition are automatically part of the subset described above, even when the harmony limitation is switched on.

Settings for LN Live

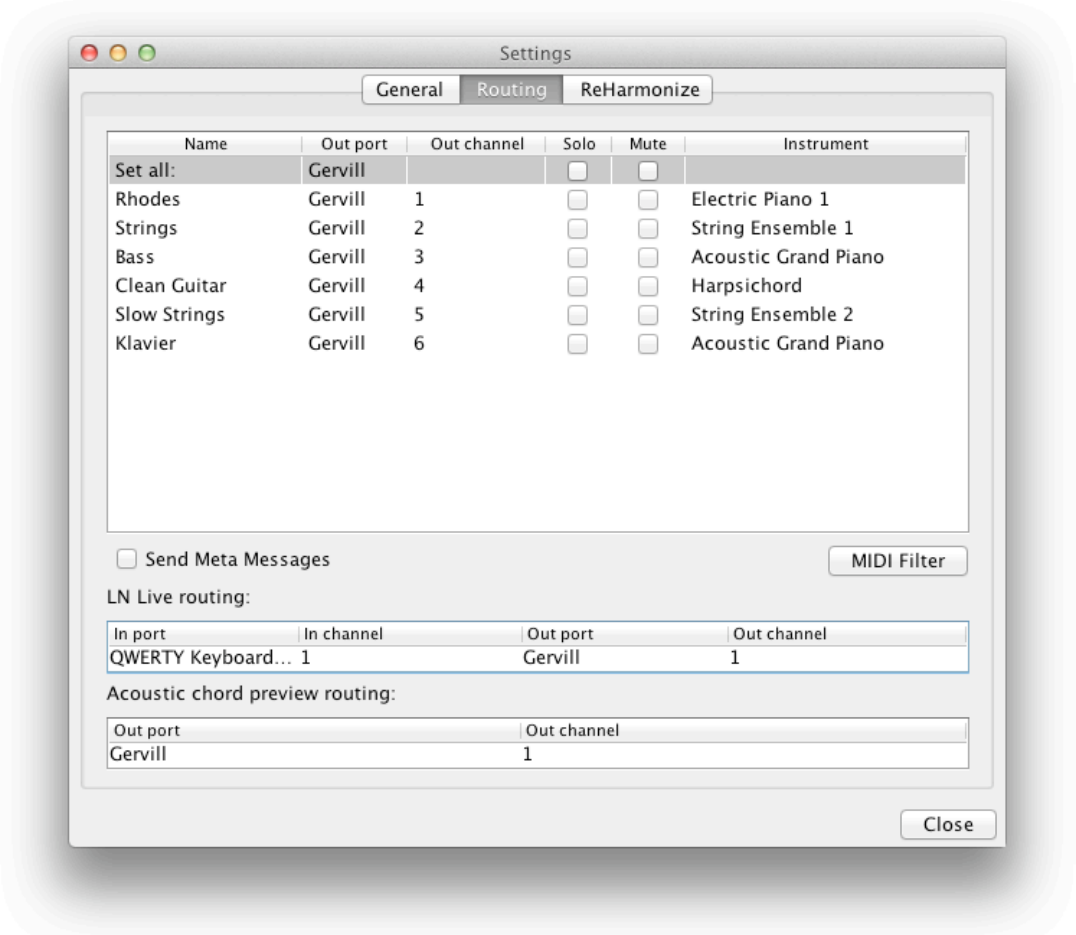
Source scale. If LN Live is connected to an external MIDI device, a source scale can be selected. For example, for a MIDI keyboard the default value in C Major means that all the white keys are available for improvisation, which are then linked automatically to the correct target tone scale. For other MIDI devices, such as MIDI guitars, it might be advantageous to choose a different source scale. Many guitarists, for example, are well versed in improvisations in the E Minor scale and thus should make this their choice.

Automatic correction of sustaining notes. If a note is sustaining during a scale change, it could possibly no longer fit the new scale. If the automatic correction is turned on, Liquid Notes terminates the respective note automatically and shifts it to the proper pitch.

Attention: For instruments whose attack differs significantly from the sound of the sustain (held note, e.g. for guitar or piano), the automatic correction of sustaining notes could lead to unwanted sound effects. In these cases disabling the automatic correction should lead to better results. In all other cases, for example when working with strings, organs, and similar "stable sounding instruments", this option should remain activated.

Routing

General



Just as you can assign each track to an instrument in the sequencer, each track in Liquid Notes can be assigned a MIDI bus and a MIDI channel. In the sequencer, each track must be connected with the desired MIDI bus and MIDI channel (MIDI input). All known sequencers act as a synthesizer and therefore it is recommended to use the sequencer which was used to create the composition as the synthesizer. Consequently, you can use all your previously set tracks from the sequencer in Liquid Notes. In addition, changes created through Liquid Notes can be recorded directly in the sequencer and will stay available for further processing.

Send Meta Messages is deactivated by default because some sequencers misinterpret these MIDI messages, resulting in notes playing endlessly. If you would like meta messages to be sent to the sequencer check this option.

*Note: Logic supports a simple separation of MIDI data via its MIDI channels (*project settings → recording → separate multi-track recording by event channel*). Therefore it is sufficient for this program if all instruments are sent to one bus, on separate channels. For the routing to Cubase sending each instrument to a different bus is recommended because the separation of MIDI data by channels is not a simple process with that sequencer type.*

Built-in synthesizers

With this port selected, Liquid Notes acts like a General MIDI player. MIDI files in accordance with this standard will be interpreted flawlessly.

Note: Multi-track MIDIs exported from your sequencer usually will not follow this standard. You can assign appropriate instruments to the MIDI tracks in your sequencer. Always route percussion tracks to channel 10.

The following synthesizers can be accessed via Liquid Notes:

- *Gervill* (Mac OS 10.6, 10.7, and 10.8)
- *Java Sound Synthesizer* (Mac OS 10.5)
- *Gervill* and *Microsoft GS Wavetable Synth* (all versions of Windows)

The Windows version of Liquid Notes allows you to choose between both synthesizers. Gervill may be excluded in older Windows systems.

Gervill is an open source synthesizer which is part of the Java Library starting from version 6 of Java. It will produce the best sound output but it could cause noticeable latencies. This can be avoided by connecting Liquid Notes with a sequencer.

The Java Sound Synthesizer is an internal synthesizer of Java, and Gervill's predecessor. This synthesizer can be expected to produce less latencies than Gervill. Here as well, the connection with a sequencer is advised to reduce latencies to a minimum.

Microsoft GS Wavetable is a General MIDI synthesizer which is integrated in all Windows systems.

Assigning instruments

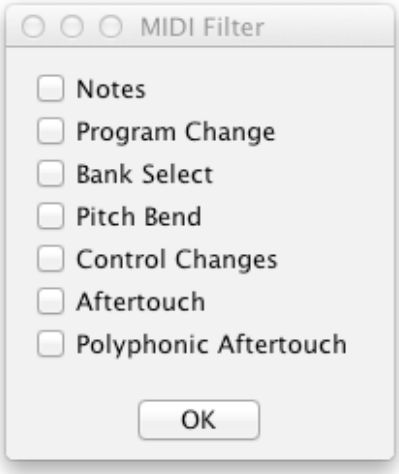
It is also possible to freely assign instruments to the different MIDI tracks in the arrangement and save them.

After the import of a MIDI file into Liquid Notes, open the routing panel in the settings window and assign to each track its own Out Channel (1, 2, 3, …) and the instrument of your choice. Tracks with the same Out Channel number are linked to the same choice of instrument.

Note: Track number 10 is always reserved for the percussion track. If you assign a track to Out Channel 10, its instrument will automatically be changed to percussion, and vice versa: percussion to tonal instruments.

When exporting your piece as a MIDI file, the exported MIDI file itself contains and saves your choice of instruments.

MIDI filter



If required, here you can select MIDI event types which must not be sent by Liquid Notes. This filter influences the routing to additional software and hardware, as well as to the built-in synthesizers.

If information about volume (Control Changes) or instrument assignments (Program Changes) has been saved with the MIDI file you want to work with, it could alter the adjustments of the synthesizer of another connected MIDI device unintentionally. To avoid this check the respective event type.

Routing for LN Live

Here you can adjust the input and output routing for LN Live. If you would like to play with the computer keyboard, select *QWERTY Keyboard* as the input. If a MIDI device is connected to your computer (such as a MIDI keyboard), you can select it here. The output routing works the same way as the routing of the *Routing table* from the *Help menu*. You may send the MIDI data to any track in your sequencer.

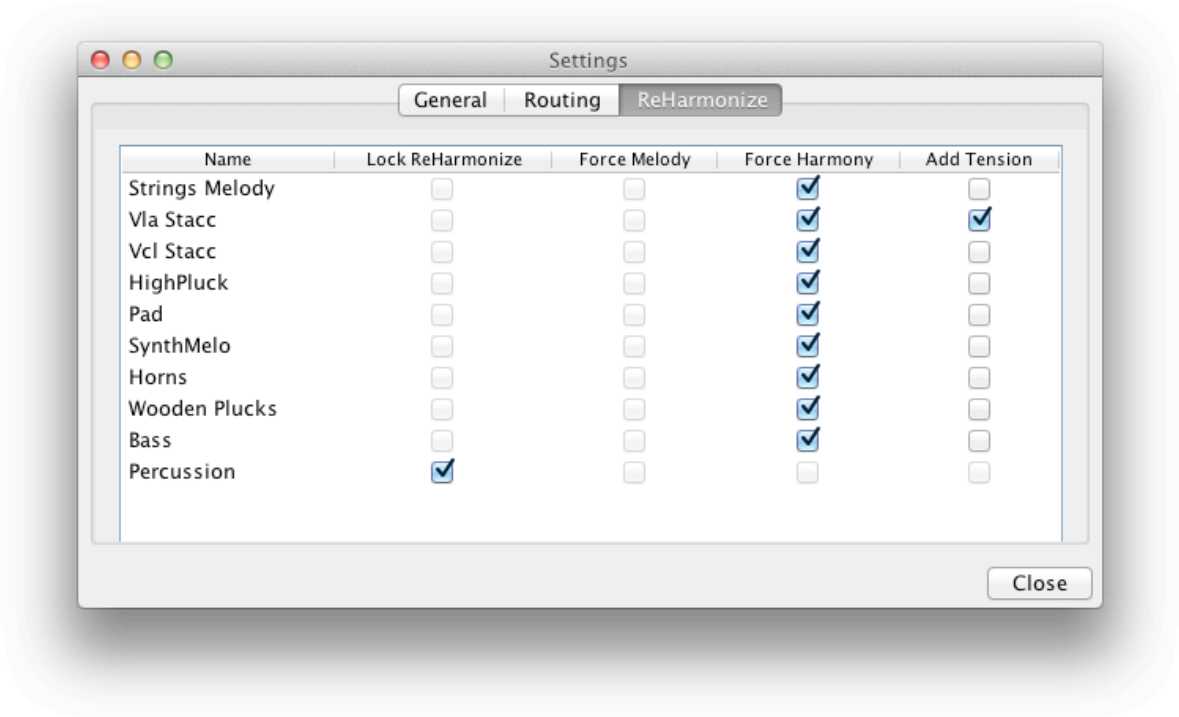
Note: When a keyboard is connected to the computer, Logic starts receiving data from it. This leads to both Liquid Notes and Logic receiving and processing the same data stream. To avoid this, insert a track before all other tracks in your sequencer arrangement (at position one), mute it, and ensure that recording is enabled. This will block unwanted sound outputs by the sequencer and is a known issue with Logic only.

Routing for the acoustic chord preview

In this line, the output routing for the acoustic chord preview can be set. It is recommended that you route to the instrument which takes over the harmonic function (e.g. the tension track of the arrangement).

ReHarmonize settings

In the *ReHarmonize table*, one or more of the following options can be enabled for each track: *Lock ReHarmonize*, *Force Melody*, *Force Harmony*, and *Add Tension*.



For correct settings it is imperative to understand the process of reharmonizing. If there were no checkboxes selected in the *ReHarmonize settings*, Liquid Notes would proceed as follows (simplified representation):

1. Melody, harmony, and percussion tracks are treated equally. (Note that percussion tracks are usually protected from changing by *Lock ReHarmonize*.)

2. The notes of polyphonic passages are moved to their nearest chord note.

3. The notes of monophonic sequences are corrected if they do not fit into the new scale, or if a certain tone is not allowed in the context of the new chord (avoid note).

4. The notes of the bass tracks are shifted so that their distance to the root note of the new chord is the same as before reharmonization. Next, the track will be treated the same way as a melody or a harmony track would.

The following settings change this basic behavior:

- Tracks marked with *Lock ReHarmonize* are not considered in the process of reharmonization and remain unaffected. This way percussion tracks and tracks that are not subject to any tonal change can be protected.

- *Force Melody* means that the notes of a polyphonic area are not necessarily moved to chord notes. They will be corrected only if they do not fit into the new scale or the new chord. This correction is not based on chord notes.

- *Force Harmony* means that notes of monophonic passages are always shifted to chord notes. This feature can be used for arpeggios, for example. Such passages would otherwise be treated like a melody.

- Tracks marked with *Add Tension* will add new tension notes to the chords if needed, with 80 percent velocity of the average chord notes. This function should be activated for at least one harmony track.

  Note: By default, melody tracks are set to Force Harmony *to produce the harmonically clearest possible results. If a melody line is rather vivid (running through a lot of notes outside of chord spanning notes), choose* Force Melody*, or maybe even* Lock ReHarmonize*.*

Part 5

Harmony Analysis

Liquid Notes executes a very extensive analysis of the composition when creating a new project. Such an analysis involves several consecutive steps, each considering different attributes of the composition. Despite the robust design of these methods, errors in the analysis might occur. This can lead to unpleasant musical effects when reharmonizing chords.

An important step is to adjust the types of tracks on the second page of the wizard. In principle, Liquid Notes recognizes the correct track types automatically. In rare cases, problems might occur.

1. Melody tracks that are partially polyphonic could be detected as harmony tracks.

2. Since priority is given to harmony tracks, a melody allocation should be preferred to a harmony allocation. Only well-defined harmony tracks should be used in the analysis.

3. Another important type of track is percussion. Percussion tracks are excluded from the analysis because they do not include relevant harmonic information. Therefore, always check whether a percussion track was properly recognized and correct the type assignment if necessary.

4. The correct type assignment of a bass track is part of the analysis and important for reharmonization.

Part 6

Frequently Asked Questions

(For more FAQs please also refer to www.re-compose.desk.com.)

What does Liquid Notes do?

1. Liquid Notes changes harmonies.

This simple process can actually lead to an unimaginable variety of results.

2. Liquid Notes delivers ideas.

Looking for an interesting chord progression for your composition? Simply create some chords in your sequencer to specify the rhythmic structure. In Liquid Notes, you can then play around with different variants and continue using the result that you like.

This step can be repeated at any time of the composition process. It makes no difference whether the composition contains one, sixteen, or even more tracks.

3. Liquid Notes refines your composition.

Have you created an interesting arrangement? You have certainly aspired to vary the composition permanently by adding new instruments or breaks and by changing the rhythm or the motif of a melody.

But have you thought about the harmonies yet?

Very small changes such as enhancing the tension of chords or a subtle substitution of a chord are perhaps barely perceptible, but increase the listening experience. Liquid Notes will help you to do just that. Like the "mastering of sound" this is just like a "mastering of a composition".

4. Liquid Notes corrects and optimizes melodies.

You have doubts whether you have always played the correct scale tones during your composition. Have you thought of all scale changes? Was a sound for one particular chord eventually not so suitable? No problem.

As a precaution, set this track in the wizard to *percussion* so that it cannot affect the harmony analysis. After the analysis is finished, uncheck *Lock ReHarmonize* and double-click on the controller of the chord regions for which you want to correct the melody.

This results in a recalculation of these areas, making the melody optimally fit within the context of the surrounding harmonies and scales. This procedure treats harmonies in the same way.

5. *Liquid Notes* is a recommendation tool for harmonies.

You wrote a song using your guitar? C, F, G, C? Why not? Many pop songs follow this pattern. But your song ought to be something special. Set these chords in a sequencer and use Liquid Notes to come up with some new ideas.

6. Liquid Notes is an intelligent instrument.

You only play correct notes. Simply use the computer keyboard or a connected MIDI instrument and improvise to your composition.

Do you want to record your project? Your sequencer generates sounds via software instruments. Just click on "record".

What can't Liquid Notes do?

1. Liquid Notes cannot change the rhythmic nature of your composition. The software shifts or creates notes and also cuts notes at chord boundaries.

2. Liquid Notes was not made with an emphasis on handling very complex music such as classical pieces. Naturally, the best results are obtained for arrangements that can be clearly classified into harmony, melody, and bass tracks. This is the case for most modern music genres.

What can I do when the processing of a chord resulted in an undesirable change of an instrument?

This problem can probably be fixed by changing the *ReHarmonize settings* from the *Settings menu*.

See also page 19, ReHarmonize settings.

Why do I get different results by substituting the same chord twice?

This is by design. For melodies especially, there are often several ways to adapt to a chord or scale change. Whether you wish to correct a note one semitone up or down, is not known to Liquid Notes.

In this case, Liquid Notes offers different possibilities. Usually, the most probable possibility is suggested first. Therefore, if you get an unsatisfactory result, simply double-click on the controller of that chord area and you will be offered a different solution.

Why did a change in the ReHarmonize settings not produce changes in my composition?

The *ReHarmonize settings* apply only to future reharmonizations. If they are changed, the relevant chord areas will be recalculated by double-clicking on the affiliated controller.

Why do I see more tracks in the Routing table and in the ReHarmonize table than in the sequencer?

The rows of these tables do not correspond to tracks, but rather to regions. In most sequencers a track can include more than one region. The notes of these regions are then grouped when saving a MIDI file, while track allocations in MIDI files are not foreseen.

A theoretical solution would be grouping regions of the same name to one track. Try using the function *merge regions* which can be found on any sequencer to make sure every track of your arrangement contains only one region.

What am I doing wrong if I receive the error message *No harmonies detected in MIDI file*?

Check the result of the automatic classification (track type detection) in the wizard. This problem is an indication that all tracks were detected as percussion. Moreover, Liquid Notes requires a certain amount of harmony information in the music composition. Even a single melody track with very few notes can cause such a problem.

The harmony analysis is obviously wrong. What is the problem?

During the analysis, Liquid Notes processes the composition if it detects at least one clear and plain harmony track.

Such a track should cover the entire duration of the composition and include chords with at least three tones. However, if there are no harmony tracks, Liquid Notes will utilize melody and bass tracks, which can also lead to correct results. In any case, a harmony track gives the best support to the analysis process.

If you specifically create a harmony track to support the analysis, it can be muted in the *Routing table*. Also check the results of the classification on the second page of the wizard. If more than one harmony track is showing there, choose the one which contains the most consistent succession of chords.

As a result of the harmony analysis I get a lot of short chords. What is the problem?

Such a result suggests that only melody and bass tracks were available for the analysis. Identical neighboring chords are usually combined into one chord.

If an analysis is done using melody and bass tracks which have a very vivid tonal course, same chords with different tensions may be detected.

If there is a harmony track, please check whether there are at least three simultaneously playing melody lines in the respective area.

To prevent Liquid Notes from producing a succession of identical chord regions, select *Merge identical chords* on the second page of the wizard.

The segmentation of the chord regions is not optimal. Why are the chord regions sometimes too narrow and other times too wide?

Check the result of the track classification on page 2 of the wizard. If more than one harmony track has been detected, choose the one which contains the most consistent succession of chords.

Try to fine-tune the attributes and to experiment a little.

Also note the two previous entries in regard to harmony tracks with a clear succession of chords and merging identical chords.

Why does adding tension does no results?

Please note the following preconditions:

- Tensions are only added to tracks for which *Add Tension* is enabled. This can be done in the *ReHarmonize table* from the *Settings menu*.

- Tensions are only added to already existing polyphonies. This also includes passages of two simultaneously playing melody lines. Adding tension does not have any effect on single playing notes.

Contact

For problems that were obviously caused by a bug, please click on *Help → Contact Re-Compose* and share with us how the problem has occurred and if so, what steps have led to this problem.

You can also contact us via the support section of the Liquid Notes website, or send us an e-mail:

Online Support:	http://www.liquid-notes.com/support.html
E-Mail Support:	support@re-compose.com

We thank you for having purchased Liquid Notes and wish you many hours of fun and musical success!

Re-Compose Team